



Safety Topic of the Month: ***If Report* - review** **Protect your hearing**

Richmond Refinery
April 2007

OE IF Report – Please view and discuss with your workgroup



Recently, a fellow-Chevron employee did not make it home after work. This fatality took place in Upstream operations. The situation may be different, but similar problems to those that led to this incident also exist here in Richmond.

Protect yourself and your co-workers from harm. Use all of the safety tools available to you, and stop unsafe work if needed. You are too precious to lose.

[If Report - Drilling Fatality When Worker Struck by Falling Pipe](#)



Protect yourself from hearing loss!

- More than 30 million Americans are exposed to damaging noise levels every day.
- 22 million American adults between 20 and 69 years of age have permanently damaged their hearing due to exposure to loud noise.



Hearing protection

- A person with a hearing disability misses hearing the things we may enjoy - music, laughter and the sounds of nature. Because communication is difficult, those with a hearing disability tend to become isolated from other people.
- Excessive noise can gradually destroy hearing. Damage is so gradual, you may not realize it is happening.
- You cannot "get used to" the noise. If the noise is bothering you less, that's a sure sign of hearing loss.
- Another early warning of dangerous noise levels is ringing in the ears. So is reduced hearing for the first few hours after leaving a noisy job.
 - As hearing loss progresses, your ear does not recover its full abilities before you return to work the next day, and more damage is inflicted.

Hearing protection – PPE Requirements

- Hearing protection is required in all operating plant areas. Two exceptions are B&S ABU and the U&E effluent treatment system that require hearing protection only within orange lined areas.
- Hearing protection is provided by using either approved ear plugs or ear muffs.
- Double hearing protection must be used in areas marked with double orange lines. Double hearing protection requires use of both ear plugs and ear muffs.



Wearing hearing protection properly (NIOSH)



The two most common types of hearing protection used are foam earplugs and earmuffs. To achieve maximum benefit from either of these, they must be worn properly.

Improper use of both earplugs and earmuffs has been observed among individuals at Richmond, as well as lack of hearing protection during the shutdowns.

In some cases, foam earplugs were not inserted far enough; in others, they worked their way loose because of head and body movement during work activities.

- Earplugs are of little value if they do not fit snug and well within your ear.
- Improper use of earmuffs typically results in an ineffective seal around the ear and reduced hearing protection.



How to wear ear plugs!

Roll and squeeze foam ear plugs

Before inserting foam earplugs, roll them into a very thin, *crease-free* cylinder. To get the diameter of the cylinder as small as possible and crease free, begin by squeezing the earplug lightly as you roll it between your forefinger and thumb. Gradually apply progressively greater pressure as the plug becomes more tightly compressed.

You may also roll it in your palms to achieve the thin, *crease-free* cylinder.

- This may be necessary if you have small or thin fingers, in which case the cylinder could end up in a distorted “barbell” shape.

A common mistake is to roll the foam earplug into a ball or cone, instead of a cylinder. This cannot be inserted very far into the ear canal and therefore will not provide effective hearing protection.



WEAR ear plugs correctly

Pull ear up and back – insert rolled plug

For the rolled and squeezed cylinder to be inserted into your ear properly, reach one hand around the back of your head and pull up and back on your outer ear to straighten your ear canal.

- If the ear canal is not straightened out, the earplug cannot slide in far enough because of the natural curve inside your ear. You should be able to feel when the earplug is in far enough to provide a good seal.



Hold plug in ear until expanded

Hold foam earplugs in your ear with your finger for 10–20 seconds to allow them to expand.

- To ensure the best fit possible, release and push again for another 5 seconds. At this point, the earplug will be positioned entirely within your ear canal.

Use both muffs and plugs for extremely loud noise



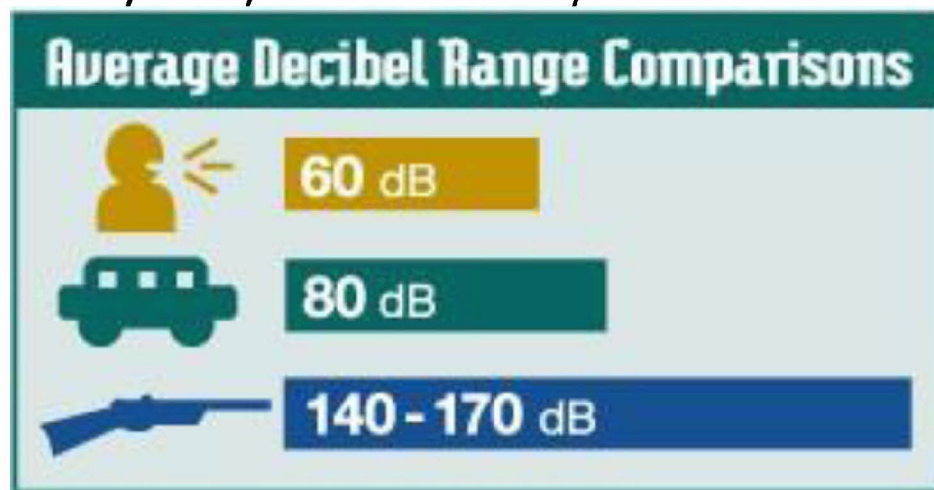
Extremely loud noise may include power saws, guns, pneumatic hammers, radio earphones, and jet airplanes at takeoff.

- NIOSH's guideline for using double hearing protection (wearing both earplugs and earmuffs) is for noise exposures that exceed 100 dBA over an 8-hour period.
- Double hearing protection is required in the refinery where an area is marked with double orange lines

Hearing Loss: Causes and Prevention

Noise-induced hearing loss is 100 percent preventable.

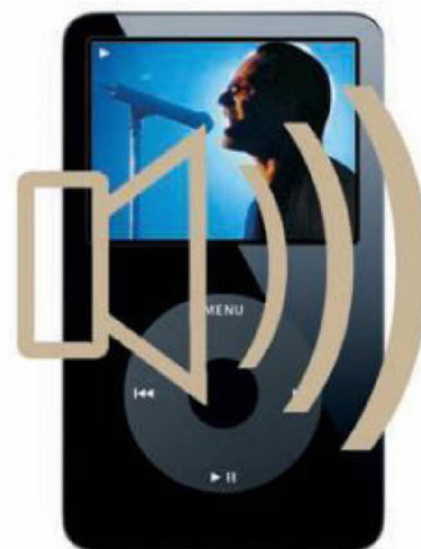
- Protect your hearing by paying attention to noises above 85 decibels, which can damage your ears.
 - These include gas lawnmowers, snow-blowers, motorcycles, firecrackers, and loud music.



Causes and Prevention

Portable MP3 players allow people to listen to a constant barrage of noise, and sound quality doesn't diminish at high volumes. Some adults and kids are turning up the volume higher - and that can lead to damage!

Lower the volume on portable stereos and televisions. When you are involved in a loud activity, wear earplugs or other hearing protective devices. Be sure to protect children as well.





Self Quiz on Hearing Protection

1. Which type of hearing protection is it possible to wear improperly?

- a. foam ear plugs
- b. earmuffs
- c. neither a nor b
- d. both a and b

2. Before placing foam ear plugs in your ears, you should...

- a. roll them in your fingers
- b. squeeze them with your fingers
- c. roll and squeeze them
- d. none of the above

3. Foam ear plugs should be inserted into your ear canals by...

- a. pushing them in with your forefinger until snug
- b. pulling up and back on ears to open up the canal
- c. neither a nor b
- d. both a and b



Hearing protection Self quiz (cont.)

4. The snug fit of foam ear plugs is achieved by...

- a. inserting them into your ear as far as possible, then letting them expand
- b. holding them in with your finger until they expand
- c. neither a nor b
- d. both a and b

5. Hearing protection for very loud noise should include...

- a. high-quality, well-padded earmuffs
- b. thicker foam ear plugs
- c. ear plugs plus earmuffs
- d. cotton in your ears plus earmuffs

6. The effectiveness of earmuffs is reduced by...

- a. long hair
- b. glasses
- c. long sideburns
- d. both b and c
- e. all of the above



Self Quiz!

7. The responsibility for wearing hearing protection rests with...

- a. your supervisor
- b. your spouse or best friend
- c. You
- d. the manufacturer of the hearing protection

8. The responsibility for wearing hearing protection properly rests with...

- a. your supervisor
- b. your spouse or best friend
- c. You
- d. your coworker



Self Quiz!

Answers

(1) Answer d. both a and b - foam ear plugs and earmuffs can be worn improperly

(2) Answer: c. roll and squeeze them

(3) Answer: b. pulling up and back on ears to open up the canal

(4) Answer: b. holding them in with your finger until they expand

(5) Answer: c. ear plugs plus earmuffs

(6) Answer e. all of the above

(7) Answer: c. You

(8) Answer: c. You